

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:  
peripheral electrodes formed on a periphery of  
5 a semiconductor chip;

internal electrodes formed inside the  
peripheral electrodes on the semiconductor chip; and  
circuits formed in the semiconductor chip,

wherein the peripheral electrodes are connected  
10 to the circuits by an internal line, and the internal  
electrodes are connected to the circuits and the  
peripheral electrodes by the internal line.

2. A semiconductor device according to Claim  
1, wherein the internal electrodes are smaller than  
15 the peripheral electrodes.

3. A semiconductor device according to Claim  
1, wherein the internal electrodes comprise at least  
one selected from the group consisting of a power  
20 supply terminal, a ground terminal, and a clock  
terminal.

4. A semiconductor device according to Claim  
1, wherein the peripheral electrodes not connected  
25 to the internal electrodes are used as terminals for  
high-frequency signals.

5. A semiconductor device comprising:  
peripheral electrodes formed on a periphery of  
a semiconductor chip;

5           internal electrodes formed inside the  
peripheral electrodes on the semiconductor chip; and  
circuits formed in the semiconductor chip,  
wherein the peripheral electrodes are connected  
to the circuits by an internal line, the internal  
10       electrodes are connected to the circuits and the  
peripheral electrodes by the internal line, and the  
internal electrodes are also connected to rewired  
lines, the rewired lines formed above the internal  
electrodes with an insulating layer therebetween,  
15       and at ends of the rewired lines formed area array  
electrodes.

6. A semiconductor device comprising:  
peripheral electrodes formed on a periphery of  
20       a semiconductor chip;  
internal electrodes formed inside the  
peripheral electrodes on the semiconductor chip;  
area array electrodes connected to selected one  
of the peripheral electrodes and the internal  
25       electrodes and formed on the semiconductor chip; and  
circuits formed in the semiconductor chip,

wherein the peripheral electrodes are connected to the circuits by an internal line, the internal electrodes are connected to the circuits and the peripheral electrodes by the internal line, and the area array electrodes comprise first area array electrodes connected to the internal electrodes by rewired lines and second area array electrodes connected to the peripheral electrodes by rewired lines.

7. A semiconductor device according to Claim 6, wherein the first area array electrodes comprise at least one selected from the group consisting of a power supply terminal, a ground terminal, and a clock terminal.

8. A semiconductor device according to Claim 6, wherein the second area array electrodes are used as terminals for high-frequency signals.